Is There a Future for Cooperative Collection Development in the Digital Age?

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ABSTRACT

OF THE THREE MAJOR COMPONENTS of resource sharing, cooperative collection development, in contrast to bibliographic access and interlibrary lending, has thus far experienced less extensive transformation as a result of new technologies. There is widespread agreement about the factors that should lead to success in cooperative collection building projects, but there is also a general sense that such projects have not lived up to their promise. The changes being experienced during the present transition to a largely digital environment offer new opportunities for cooperative collection development efforts but also call into question the value of investing in models based on a predominantly print environment. Collection development librarians may find that, in the future, their expertise may be the most important resource they have to share rather than the collections they are building.

The phrase "access over ownership" and its variants had achieved, by the early 1990s, an almost mantra-like status among librarians from all types of libraries. Its widespread currency, however, reflects more than just the rhetorical effectiveness of an oversimplified concept. Increasing pressures on the budgets of all libraries, especially research libraries, together with improved means of communication and delivery, have forced librarians to make a virtue of necessity and pay increasing attention to resource sharing as an important element in the package of services offered to users.

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Most would define the "resources" of resource sharing to be the information resources typically collected by libraries and made available under certain conditions to users not traditionally a part of the owning library's clientele. Later discussion will suggest that the concept of the resources to be shared in the new electronic environment needs to be broadened to include human and computing resources, among others. In traditional terms, however, resource sharing focused largely on three functions or tasks: (1) bibliographic access—that is, knowledge of what is available for sharing from other sites through such means as union catalogs or bibliographic utilities; (2) a system for making requests and providing delivery of information, chiefly through the interlibrary loan (ILL) process, often bolstered by agreements among members of a consortium to provide expedited service to members; and (3) cooperative collection development, which sought to ensure that libraries built complementary collections of resources on which to draw. The only essential component of resource sharing is the second, a protocol for making requests and acceptable methods of delivery. Convenience and political considerations have caused most resource sharing to occur within the confines of a consortium or federation of libraries, though a consortial relationship is not absolutely necessary to cooperation at its most basic level.

Developments over the past twenty years have revolutionized libraries' ability to provide bibliographic access, even if these developments did not arise primarily to serve the needs of resource sharing. Innovations introduced over the past five or ten years are fundamentally altering the nature of interlibrary loan operations. Only in the third area, cooperative building of collections, has major change been slow to come. Yet, as many have pointed out, offering access as a stand-in for ownership works only when another library has chosen ownership over access and is willing to share the wealth (Branin, 1991, p. 82). The following paragraphs will touch briefly on some of the familiar changes in the ways bibliographic access is provided along with the changes being experienced on the delivery side of resource sharing. However, for its primary focus, this discussion will be about cooperation in the realm of collection management and development and the role of cooperative action in bringing about change in the processes of scholarly communication.

A number of significant advances based on machine-readable cataloging produced the incidental effect of dramatically improving access to bibliographic information for resource sharing. The rise in the 1970s of bibliographic utilities like OCLC and RLIN and their universal use by larger libraries provided *de facto* union catalogs for purposes of identifying, at the title level, materials held elsewhere. In the 1980s, many libraries began to implement integrated library systems locally, including online public access catalogs (OPACs) and acquisitions and serials subsystems.

In some ways, this development represented a step backward for resource sharing, since the OPAC allowed libraries to make records for certain materials available to local users without requiring them to be made available to other libraries through national utilities. The explosion in the use of computer networks in the mid- to late-1980s compensated somewhat for this regression by enabling the persistent to search the catalogs of other libraries. The steady progress of retrospective conversion in the 1980s and 1990s also enhanced resource sharing efforts as more and more locations for older materials became findable by online searching. Finally, the increased acceptance and implementation of standards such as Z39.50 began to make it easier to search the catalogs of other libraries for all kinds of records.

Technology has also had its effect on the provision of documents via interlibrary loan. Taking advantage of every advance from the photocopy machine to the latest scanning devices, interlibrary loan departments have tried to keep up with sharply increasing demands. The 1993/94 *ARL Statistics* (Association of Research Libraries, 1995, pp. 8-9) shows an increase in borrowing by ARL libraries of 99 percent and an increase in lending of 50 percent in the years between 1986 and 1994. Most of those writing about resource sharing and cooperative collection development have recognized the absolute centrality of effective delivery to the success of cooperative efforts (Mosher & Pankake, 1983, p. 426; Branin, 1991, pp. 90-91). For remote access to substitute for local ownership, a library must minimize the time between identification of a needed resource and its provision. While few expect the time lag for remote resources to approach that offered by locally held materials (when those materials are on the shelf), there is general agreement that the average time of delivery must be reduced from its current average. Projects such as the North American Interlibrary Loan and Document Delivery Project, sponsored by the Association of Research Libraries, are seeking ways to streamline and improve the quality and speed of interlibrary lending (http://ARL.CNI.ORG/ACCESS/NAILDD/status.html). Recent studies have also highlighted the real costs of interlibrary loan transactions and led to renewed efforts to improve efficiency and effectiveness (Roche, 1993). Wider use of faster methods of delivery have cut the time spent by "returnables" in transit, while such systems as ARIEL have helped improve the quality of transmitted images as well as allowing for delivery of scanned images to the user's desktop. All of these steps, both actual and prospective, have led to incremental improvement in the delivery component of resource sharing, but it is fair to say these improvements have not yet convinced most users that access to remote information sources is the near-equivalent to local resources. The growing utilization of commercial document suppliers has also enlarged the range of delivery options available. At the same time, they have heightened awareness of the value

which users attach to rapid delivery and put added pressure on ILL units to match their speed.

One of the most interesting new directions is the move to allow patrons to initiate direct and unmediated requests for materials from other libraries. Enabled by the technologies of the Internet, by standards like Z39.50 and Z39.63, and by more and more user-friendly interfaces, patron-initiated ILL could potentially increase the usage of distant resources substantially. It also raises a host of policy issues for libraries and consortia hoping to implement this service. For example, should all classes of users be allowed access to direct borrowing? Should a loan in this environment be governed by circulation policies or by interlibrary loan protocols? If governed by circulation policies, whose, the borrowing or lending library's? Should borrowing of locally held material be allowed? Should there be limits on borrowing by individual patrons to discourage abuse? Is the loan made to the borrowing library, as in the ILL model, or to the patron, as in a local circulation transaction? If to the patron, who assumes responsibility for ensuring return? Patron-initiated ILL promises to put pressure on consortial commitments to view members' resources as a seamless whole, the consortium as "one library." The ultimate vision of resource sharing posits a completely digital environment in which the user identifies the electronic resource he or she wants through a comprehensive system of metadata and then simply connects to it without knowing or caring where it resides.

Resource sharing among research libraries, and between research libraries and libraries with less extensive collections, has long occurred—and will continue to occur—no matter what takes place in the realm of cooperative collection development. There is little evidence to date that cooperative efforts aimed at acquisitions have had more than a modest effect on other aspects of resource sharing. There is, however, widespread belief that cooperation in building collections can significantly improve the quality of library service by broadening and deepening the range of materials collectively available. Libraries—so the argument goes—can increase that portion of the information universe maintained within the national (or state or regional) collection through a planned and conscious division of labor in building collections. Thereby, users will have access to a collectively richer whole than if that collection had been developed purely in response to local imperatives. In the paragraphs that follow, some of the fundamental assumptions related to cooperative collection development and resource sharing will be examined, and suggestions will be offered about the future directions that cooperation relating to information resources might take. Uncertainty about the characteristics of the scholarly information universe makes such speculation more than a little risky. Nevertheless some vaguely outlined shapes seem to be emerging from the mist. The stakes for the constituencies that research

libraries serve (and therefore for libraries themselves) are high enough that librarians and scholars must examine the implications of future scenarios carefully and marshall their efforts to meet the most important and realistic goals.

The purpose of cooperation among libraries has been summarized as providing "better, faster, easier access to more" (Allen, 1994, p. 9). Cooperative collection development has to do almost entirely with the "more" of this definition. The improvements sketched above relating to bibliographic access and delivery are chiefly concerned with "better, faster, easier." A fairly standard model for cooperative collection development in the print environment divides the information universe into "core" and "peripheral" materials. A research library has a responsibility to maintain on-site a "core" collection that serves immediate needs, especially those of its undergraduates. At the same time it will develop collections of "peripheral" material in selected areas that respond to local priorities but also serve consortial needs. This collection, in turn, is backed up by the collections of consortial partners built through distributed responsibility for peripheral materials in complementary fields. Defining what "core" and "peripheral" really mean has always been one of the stumbling blocks to successful cooperative projects. In general, materials on the periphery were considered to be research materials (of the sort that might form the bulk of an RLG level 4—or perhaps level 3—collection) unlikely to be in heavy demand by any member of the consortium. Described from another perspective, the body of material to be shared would come from that 80 percent of a research collection which received 20 percent of the use (Branin, 1991, pp. 85-86).

Cooperative collection development has so far been a marginally important component of resource sharing, not a mandatory prerequisite. In the 1960s and 1970s, collection budgets at many research libraries were strong enough to build deep collections in many subject areas. While no one could supply locally everything called for by those conducting research on campus, the different emphases in universities around the country, supported by relatively generous resources, resulted in naturally diverse collections. Overlap was considerable, to be sure, but many libraries were able to acquire substantial amounts of unique or rarely held material as well. This situation corresponded roughly to the model described by Mosher and Pankake (1983) as the status quo approach to cooperative collection development: "This approach presumes that the total collecting activity of ARL and other major research libraries achieves, on a national scale, reasonable depth in every area of interest to research in the United States, both in the present and in the future. It is the total of the collections of research libraries which approaches comprehensiveness" (p. 424). The means for discovering what was held elsewhere were primitive by present standards, but, through the happenstance of differ-

ing programmatic focus and selectors with deep pockets, the range of resources acquired and held was collectively broad. Today, there is growing evidence that the range of resources is becoming narrower, and collections are becoming more homogeneous. The indications for this are most clear-cut in the journal literature of the sciences, medicine, and technology, and in material published outside the United States in the humanities and social sciences (Chrzastowski & Schmidt, 1993, 1996; Perrault, 1994; Reed-Scott, 1996).

Yet, despite growing evidence that the national collection being amassed today is weaker than it was, and despite advances in many aspects of resource sharing, cooperative efforts in building collections have still been limited in their impact. Why is this the case? Have cooperative collection development efforts failed to achieve more because they have so far commanded only a limited amount of time and energy? Or have they been constrained by the competitive culture of the academic world, by the still unacceptable slowness of delivery, or by copyright restrictions? It could be argued that, whatever the cause, this is an endurable state of affairs, not because the rich tapestry of strong collections renders the attempt unnecessary, but because the time and energy such efforts require of collection development and other library staff are more urgently needed elsewhere, in particular, to invent and build the national digital library. This question will be discussed later, but first it may be useful to review some of the standard beliefs about cooperative collection development.

In a review of the literature related to cooperative collection development, two noteworthy themes emerge. First, there is remarkably widespread agreement about many of the factors which should lead to success. Second, there is a grudging admission that "only modest successes can be identified" (Branin, 1991, p. 87) among the many cooperative collection development efforts that have been underway over the past half century. These somewhat contradictory ideas raise some questions. How reliable are the success factors identified, if successes to date have been only modest? Are they so rarely found together in sufficient strength and quantity that most efforts are doomed to failure? Or is there a missing critical factor—yet to be clearly identified—which would serve as a catalyst to enable the rest to result in substantive achievement? Perhaps verdicts of limited success underestimate the long-range effects of cooperative collection development work in the late twentieth century. Would the research collections which now serve the nation collectively have been much less diverse than they actually are had it not been for the dozens of "modestly successful" efforts around the country? Finally, how will librarians and scholars know if they achieve success? How is success in cooperative building of collections to be measured?

Many authors have described the factors which influence the success of cooperative collection development undertakings, and there is no reason to discuss them at length here. It will be useful, however, to review some of them briefly. Some of the more frequently mentioned success factors include common goals among members of the cooperative group, recognition of local priorities, leadership, physical and bibliographic access, effective delivery, and effective communication among participants.

Clearly partners in a cooperative collection development enterprise must feel a shared sense that cooperation will provide benefits to each of them, and that there is a compelling reason to put resources into such an effort. The most compelling motive is financial. In a world with enough money to buy materials, enough catalogers to describe and classify what was bought, and enough shelves to house what was cataloged, local ownership would still provide the best access, at least when print on paper is the medium at issue. Fiscal realities have never allowed many libraries to operate in anything approaching this setting, and the recent well-documented pressures on library budgets have made such a model almost unimaginable. The fiscal imperative for cooperation leads immediately toward one of the fundamental conflicts that cooperation entails. Campus and sometimes library administrators in research universities expect that coordinated acquisitions and resource sharing can magically do away with the need to find hundreds of thousands of new dollars every year to feed the inflationary appetites of the materials budget. On the other hand, collection officers and bibliographers are convinced that no less money is needed but claim that it can be spent differently to create more diverse collections and thereby better meet the needs of researchers. This argument can lead to the cynical view that collection administrators and bibliographers are seeking to maintain the information resources budget at all costs because it remains the primary source of whatever power they possess.

Resource sharing arrangements in general, and cooperative collection development activities in particular, cannot succeed unless they recognize the overriding importance of local needs. "Programs must be responsive and minimally threatening to local priorities and programs" (Mosher & Pankake, 1983, p. 425). Commitments which call for putting consortial demands above local priorities are unlikely to remain viable for long. Some models for cooperation have sought to make a virtue of this strong bias for local needs by attempting to base cooperative programs on local strengths (Branin, 1991, pp. 98-101). With this approach, an institution accepts responsibility to collect for the consortium in areas which also meet local needs and reflect local strengths. At the same time, a commitment by one library to a particular area does not obligate consortial partners to give up supporting that area itself. As stated by Mosher and Pankake (1983): "No institution should be obliged to give

up anything it wants to keep" (p. 425). Recognition of the importance of the local imperative, then, is a key element of any successful cooperative program. If this recognition of the primacy of local needs is taken to its logical conclusion, the question must be asked whether cooperative programs that rely on an institution meeting local needs in order to meet consortial goals really make a significant difference to what it collects? Or will such an institution acquire more or less the same titles it would have acquired anyway?

Another factor often cited as a key to successful cooperation is leadership and vision on the part of both campus and library leadership and among faculty and librarians at the operational level. The leadership for many cooperative initiatives has come from above—from collection development officers, from library directors, from provosts or other campus leaders, even from legislators. While vision and leadership are vital, the top-down approach can lead to difficulties, because the change in behavior that successful cooperation demands must take place at the level of the librarian making title-by-title decisions. If the selector has no belief in the value of cooperation and sees no payoff for that change in behavior—or perhaps sees risk (e.g., a reduced budget)—his or her enthusiasm for cooperation is not likely to be high. The involvement of bibliographers and selectors, not simply in implementing decisions made by others, but in planning and defining the contours of cooperative projects, is therefore seen by several observers as critical (Mosher & Pankake, 1983, p. 426; Dominguez & Swindler, 1993, p. 488). An often overlooked function of leadership here is the role of university and library leaders in selling the concept of resource sharing and shared collection building on campus, especially to faculty and other researchers. To accept reliance on other libraries' resources demands cultural changes among faculty, who must give up cherished notions about the self-sufficient collection, browsing, and immediate access. Leadership is required not only to persuade library staff of the merits, or necessity, of cooperation, but also to ensure that the message is delivered to the rest of the academic audience.

As discussed earlier, bibliographic and physical access to collections is one of the most obviously important aspects of successful resource sharing and cooperative collection development. If users cannot discover what consortial partners own, and cannot get it into their hands within an acceptable amount of time, divisions of labor in collection building are self-defeating. Although physical proximity has receded as a pivotal factor in resource sharing arrangements, it can still influence the degree of success experienced. A significant part of interlibrary lending traffic still consists of "returnables," which are more quickly transported by courier among libraries within reasonable geographic proximity. Proximity also allows for easier movement of people to collections, often a more

convenient way to share resources. Nevertheless, technology has brought about a measurable reduction in the importance of distance as part of the equation for successful cooperation. The advent and widespread use of computer networks has also reduced, though not eliminated, the importance of another major barrier to cooperation in the past—the difficulty of communication among selectors and collection officers in different institutions, and the labor-intensive maintenance of the tools of cooperation. Electronic mail, standards for linking library catalogs and databases, and other elements of the digital revolution have radically improved the ability of selectors to communicate and inform their decision-making with knowledge of the decisions made by counterparts elsewhere. Yet the electronic community, enabled by e-mail and the Internet, does not replace the human-scale community permitted by face-to-face communication. Particularly when a group of selectors does not know one another from work in national, regional, or state settings, such face-to-face meetings offer the best chance of leading to productive working relationships.

Besides access to electronic mail and support for software that makes group communication by e-mail easier, cooperative collection development efforts can benefit from a number of additional tools and support mechanisms which can improve their chances of success. Many of these tools are emerging from the growing maturity of library automation and widespread access to networks. Certainly, ready access to the catalogs of consortial partners—especially when those catalogs include acquisitions as well as fully cataloged records—supplies one of the missing ingredients in older cooperative activities: information about partners' decisions at the title level. Even so, the infrastructure to support cooperation among selectors still has gaps. For example, it remains difficult to identify quickly and conveniently the serial commitments of consortial partners. With serial commitments demanding such a significant portion of the budget, the relative difficulty of obtaining such information can present serious obstacles to cooperation, especially in heavily serial-dependent fields. Though the effect on collaborative decision-making for future acquisitions is limited, the unevenness of retrospective conversion efforts, and the absence from many catalogs of certain categories of materials (government publications, maps, etc.), can also limit the effectiveness of cooperation.

It may be useful to examine some of the reasons offered for the limited success of cooperative collection development efforts to date. Branin (1991, p. 89) suggests that the priority given to local collections has pushed consortial efforts into second place. He also mentions the unwillingness of libraries to give up autonomy, the difficulty of administering consortial programs outside of a relatively limited geographical range, and the lack of sufficient authority in many regional and national programs

(pp. 105-06). Atkinson (1996), besides citing the local imperative, also mentions "the failure to factor into cooperative collection planning such post-acquisitions functions as processing and storage" (p. 29). He further notes that libraries have not taken into account the fact that most of the information they wish to share is owned by others who do not want to see it shared in ways that reduce their potential revenues.

It has even been suggested that success in cooperative collection development is not really the objective, and that there is a degree of hypocrisy in the nominal support it receives (Atkinson, 1996, p. 30). Everyone, from the president or provost of the university to the individual bibliographer, pays lip service to its importance and value, but no one expects or wants cooperative activity to have much more than a minimal effect. What is important is the appearance of effort. Atkinson (1993) cites this argument as "cynical and mostly wrong" but containing "some elements of truth" (p. 29). As he summarizes the argument, it suggests that librarians do not want cooperation to succeed because it would result in loss of budget. The faculty do not want such efforts to succeed because the current system creates artificial markets for specialized publications in which they can publish and build their reputations. The university, dependent on the faculty for its own competitive reputation, connives in the charade.

One possible way to test the truth of this assertion would be to examine the extent to which rewards for selectors, collection administrators, and university librarians are based on their contributions to cooperative efforts. Of course, measuring the performance of collection management librarians is difficult in the purely local environment and even more challenging in a consortial setting. If libraries are serious about the importance of successful cooperation, however, it is essential that library administrators find ways to measure success in this arena and make sure that valuable contributions really count when awarding salary increases and promotions.

Many of those writing about cooperative collection development have focused on the need for consortial commitments to match local priorities. Relatively little has been said, however, about the importance of coordinating consortial commitments to purchase with commitments to provide acquisitions, cataloging, preservation, and reference services. There is an unspoken assumption, perhaps, that if commitments result from local priorities, the effects on these related services will be minimal. But there is little evidence that acquisitions, cataloging, and reference staff have been integrally involved in the development of cooperative collection building projects, especially at the planning stages.

While it is commonplace to assert that cooperative efforts have failed to live up to their promise, there is little or no data to support this assertion and no widespread agreement about the right measures for success

and failure. This lack of objective measurement reflects the larger difficulties that collection development has measuring its effectiveness in either quantitative or qualitative terms. The campus administrator interested in slowing the inexorable growth of the acquisitions budget might wish to apply a rather crude measure—reduction in expenditures—to measure success. By that token, of course, cooperative collection building projects have failed completely. Librarians may counter that the growth rate of expenditures has slowed because of cooperative efforts, an assertion difficult to prove at best. For the bibliographer or collection development officer whose announced goal is to use the same amount of money differently, to broaden the consortial collection, measures of overlap and uniqueness need to be used more systematically to measure success. Dominguez and Swindler (1993, p. 470) apply this measure to the long-standing cooperative arrangement among the Research Triangle University Libraries. They report that 76 percent of the titles in their shared online catalog were found on only one campus. In this instance, it seems intuitively probable that the cooperative programs among these universities—often cited as one of the most effective in the country—have increased this percentage. Even so, it is impossible to know what the percentage of overlap might have been without such programs. Because of its inherent difficulty, there has understandably been little effort to measure the extent of changed behavior caused by cooperative arrangements—particularly the cumulative results of decisions *not* to buy certain materials.

The future of cooperative collection development is inextricably linked to the future of collection development itself. Cooperative collection development exists solely to further the library's goal of meeting local information needs—the classic and traditional function of collection development. Until recently, the entire edifice of resource sharing and cooperative collection development has been based on the assumption that information is contained in physical objects which are relatively difficult to move through space and time. Even electronic technologies which make this process more efficient—fax and digital transmission of images—are slowed by the need to fetch and handle these physical objects. The innate grounding of collection development in the physical object, its focus on the distinction between what Atkinson (1993) called the collection and the anti-collection, renders its function in the coming digital world questionable at best. Should the research libraries of the United States put substantial human resources into adapting and emulating the model provided by the Triangle Universities in order to address collaboratively the problems of collecting mostly print resources in the late twentieth and early twenty-first century? The answer to this question depends on what librarians collectively believe about the pace of the transition from print to electronic and on the probable shape of that digital world.

Many have noted that we are in the midst of a transition from a world of scholarly communication dominated by print—the journal and the monograph—to one in which digital networked information packages will be the primary vehicle for communication among researchers. A fundamental question facing those who have done traditional collection development is where to put their limited, much fragmented, energies and resources over the course of this transition. Recently, Dan Hazen (1995) called into question the value of the traditional collection development policy in the electronic information age. The same skepticism should perhaps be applied to the widely assumed value of cooperative collection development. If librarians were facing the same fiscal pressures now commanding their attention, watching as collections became more and more homogenous, but in an unnetworked, nondigital environment (a scenario difficult to imagine, at best), it would clearly be worth the effort to find ways to overcome the obstacles in the way of successful cooperative collection development. The massive challenges now facing the academic world in the face of the digital revolution demand that the utmost attention goes to ensure that the development of the new environment favors the advancement of research, teaching, and learning. If this effort succeeds, it is likely that the goals of cooperative collection development will be achieved almost as an unintended byproduct. If librarians and scholars fail in this endeavor, then success in cooperative collection building may be largely irrelevant.

The electronic future may take any of several forms. It is possible to make intelligent guesses about potential scenarios for such a future, but assurance is inherently out of reach. In what is likely the rosiest scenario for the academic community, scholars, scholarly societies, and institutions would assert responsibility for "publishing," organizing, managing, preserving, and disseminating the research reports and related information which they, and other researchers with similar aims and values, produce. Such a scenario could be characterized by practices regarding intellectual property which allow great latitude in the use of information. A less attractive alternative scenario would see major academic publishers maintaining control of the distribution of scholarly information and restricting its flow through licenses that are designed to ensure a revenue stream—whether to make a profit or to subsidize the economic vitality of a scholarly society. In this scenario, the publisher would maintain strict control of intellectual property and would further control the use of information through licensing with rights more restrictive than those permitted through copyright. At the same time, copyright law in the electronic environment might change in ways that degrade the group of rights known as "fair use." Obviously variations and combinations of these two scenarios are both possible and likely, and other quite different futures are possible.

Even in the current transitional and hybrid system, the changes already underway are transforming cooperation among collection development librarians. Most electronic information available commercially in the present environment relies on licensing for use by libraries. The emergence of consortial approaches to licensing such information has led to some of the most dramatic financial successes of resource sharing. Unlike traditional cooperative collection development, which seeks to rationalize and distribute responsibility for acquiring little-used marginal publications, shared approaches to licensing tend to focus on high-use high-demand databases which all or most members of a consortium wish to make available. Even when this is research-intensive information, the ability to provide immediate access from anywhere makes it far more shareable than the peripheral material that was the traditional object of cooperative collection development.

While the details of individual licenses are often privileged, the experience of consortia, such as the Committee on Institutional Cooperation (CIC—the academic consortium of the "Big Ten" institutions and the University of Chicago and University of Illinois-Chicago) and the University of California system, show that considerable savings can result when libraries form partnerships to negotiate access to expensive electronic products. Besides the savings in data costs, such joint licensing will usually save money in terms of staff support for managing the information and computer resources required to store the data and run search software. The experience of negotiating licenses within a consortial setting also raises awareness among librarians of the importance of paying careful attention to the terms and conditions of licenses. The combined buying power of the consortium has a better chance than do individual libraries of persuading data providers to alter unacceptable terms in addition to lowering their prices. Besides sharing the cost of access to mostly bibliographic databases, there is also potential for distributing labor and sharing expertise in the management of full-text electronic resources, as is currently being attempted within the CIC with electronic journals and electronic texts in the humanities. Here, it is not primarily the cost of the resource itself that is motivating cooperation but the reduced overhead of managing them collectively. Experiences within the CIC also point to the absolute necessity of taking into account "post-processing" activities in making decisions about such resources. In a sense, the decision to acquire or not to acquire (or, to license or not to license) is the most straightforward of all. The more difficult issues relate to providing an acceptable interface to the resource, ensuring that it is kept up to date (traditionally, the task of serials acquisitions), and preserving it. Resolving these issues mandates the involvement of staff from many functional areas of the library system.

There are unmistakable signs that the changes now occurring and those yet to come will continue to transform the basic terms of reference of cooperative collection development. The classical model was based in part on the understanding that a large segment of any research collection was seldom used, and that a limited number of copies of this lesser-used material would suffice for a region or the nation. Collection development librarians were the ones best positioned to identify and select appropriate titles to stock this shared collection of lesser-used research materials. Their qualifications were based on subject knowledge, understanding of the publishing world in that subject, knowledge of academic programs both generally and locally, and familiarity with ways of acquiring sometimes obscure and difficult-to-get material. Selection for some kind of local ownership will probably continue to play a role in the provision of electronic resources for some time to come. Gradually, however, the function of selection will likely pass more and more into the hands of users, who will exploit the tools provided by libraries and others to identify and retrieve material through the network. Collection management administrators will likely become managers of electronic rights, ensuring that the avenues are open for the users of his or her institution to get to the information they need. One feature of the new environment which has a basic effect on cooperation is the lessened, if not eliminated, importance of the concepts of location and copy. If access is permitted to an electronic product (by licensing, adequate bandwidth, good interfaces), it does not matter whether the user is on the same campus or half a continent away, nor does it necessarily matter if there is one copy or hundreds. The notion that fewer—or single—copies of lesser used material are enough for a consortium, while multiple copies are needed for materials in local demand—a fundamental distinction in cooperative collection development—is irrelevant.

How fast the changes in scholarly communication will take place is one of the unknowns. At present, most research libraries still spend approximately 90 percent or more of their acquisitions budgets on print, microform, and similar formats. Despite being the center of attention, and despite their high unit cost, electronic resources have not begun to consume even a quarter of the information resources budget of a typical research library. The production of scholarly information in print form does not seem to have diminished. Predictions have differed about how quickly the shift to a predominantly digital environment will occur—some believing it will be gradual and prolonged, others that it will be abrupt and is imminent (Odlyzko, 1995; *The TULIP Final Report*, 1996). It seems likely that the shift will occur at different rates in different fields. What, if anything, does this mean for cooperative collection development? It is at least partly a matter of resources and priorities. If the transition to a digital system of scholarly communication is near, the most urgent task

for librarians—especially collection management librarians—is to ensure that the system-to-be meets the needs of the academy. One of the truisms of cooperative collection development is that it is difficult and time consuming. So far, it has at best fallen short of its promise. Are the energies and efforts now being put into cooperative collection development projects better spent shaping the electronic future in ways that serve the goals of research, scholarship, and teaching? Or will the pressures on print research collections continue to be so severe that librarians must pay continuing or increased attention to collaborative collection building over the course of the transition? Note that this rhetorical question does not imply that other aspects of libraries' resource sharing efforts focused on print—particularly improvements in delivery and bibliographic access—should be slowed. The payoff for making interlibrary lending and borrowing work better will be immediate and can take advantage of the existing shared collection. The benefits of cooperative collection development may take years to be felt, if they achieve meaningful results at all (Mosher & Pankake, 1983, p. 425).

The suggestion that cooperative collection development projects may not be worth doing because the print environment will not survive long enough for the labor to make a difference certainly rests on assumptions that ought to be questioned. It is reminiscent of the claim sometimes made by campus planners that new library buildings will never again be necessary because of the shift to digital resources. Nevertheless, there is enough potential validity in this argument that it should command the attention of those deciding priorities for librarians' attention over the next decade. If it does not categorically demand reducing the level of priority for cooperative collection development as it is traditionally understood, it does suggest that librarians should give careful attention to the focus of cooperative efforts. Those fields in which the transition to digital formats is likely to take longer, or in which print is expected to retain its hold indefinitely, may well be the best candidates for cooperative activities based on traditional models. It may also be time once again to look more closely at more radical and sweeping approaches to cooperation. The time for handcrafted approaches like those based on the RLG Conspectus may be over.

The object of attention of cooperative collection development in the past has chiefly been the information unit—or the subset of information units that comprised a narrowly defined field. Selector involvement was important, because a selector who knew the field that was the object of cooperation was now expected to select for a broader audience—the consortium or even the nation. The availability of subject expertise was assumed to be an indispensable prerequisite of most traditional projects. In the emerging digital world, selection for local ownership is likely to recede in importance as the central work of collection development

librarians, who by and large comprise the largest group of subject experts in research libraries. What may in part replace selection as their core activity are various kinds of mediation demanding the same kinds of subject knowledge, along with knowledge of the emerging electronic universe. Subject specialists who once functioned primarily as selectors are in a good position both to guide users through the chaotic world of electronic information that is likely to persist for some time, and to play a role in organizing that world and helping to provide markers of quality and appropriateness. Several authors have recently discussed librarians' potential roles in this arena (Hazen, 1995, pp. 30-31; Atkinson, 1993, pp. 103-05). If it seems self-evident that the subject specialist/selector can make a significant contribution to this effort, it seems equally self-evident that this is a task in which cooperation is essential, particularly among the research libraries which employ a significant percentage of the subject experts working in American libraries.

If making sense of the emerging digital information environment is one task for selectors in which cooperation can play a role, another is what might be termed transitional cooperative collection management. Cooperative collection development has tended to focus primarily on transforming the way decisions were made about new additions to the collection. There have of course been a number of cooperative storage and preservation projects, and the Center for Research Libraries was created as a means of managing little used materials collectively. The task of managing large print collections, less and less frequently used, characterized by considerable overlap and often in poor physical condition, is likely to become an increasing financial burden for research libraries. Addressing this problem could follow two parallel tracks, both of them benefiting from collaboration and the sharing of resources. First, libraries could work together to make collective decisions about which titles to store, distributing responsibility for retention and allowing for the emptying of potentially miles of shelf space. Such a program, if feasible at all, would require active selector involvement and also has complex and serious implications for reference service, not to mention technical services and preservation operations. Second, libraries could collectively approach projects to digitize selected portions of the record of the past. Once again the advantages of collaborating—in selecting what to digitize, in dividing the labor, in sharing expertise—are obvious. In particular, the need to be selective, to identify priorities in approaching the massive amount of material available to digitize, also calls upon the skills of subject specialists working together in collaboration.

Resource sharing in the past has been based on a scarcity of fiscal resources, which resulted in reductions in the range and depth of information resources individual libraries could make available. Two CIC institutions have recently begun sharing the services of a South Asian bibli-

ographer through a joint appointment. In the research library of the late twentieth century, the scarcest resource may well turn out to be human expertise, particularly in subject disciplines and technology. The dearth of area studies specialists is already being felt in certain fields. The sharing of subject specialists and the pooling of their expertise may become the most important resource to be shared in coming years.

The changes being experienced in the course of the transition to a largely digital environment offer new opportunities for cooperative action in making information resources available to clients. At the same time, the nature, urgency, and speed of these changes call into question the value of continuing to invest in models of cooperation based on a predominantly print environment. The reasons for finding effective ways to develop coordinated collections were never stronger. On the other hand, the uneven track record for traditional cooperative projects, in conjunction with the rapid expansion of networked electronic information, argues for careful selection of areas of focus, for consideration of radically different approaches, and for a healthy skepticism about the level of effort earmarked for such activities. These conflicting impulses can induce real ambivalence about the future potential of cooperative collection development, at least in its traditional forms, in resource sharing. Certainly, the focus on collective action to help build, exploit, and manage the digital environment could bring measurable and meaningful results. Beyond that, collection development librarians may find that knowledge of the digital world in their subject specialty, rather than their collections, may be the most important resource they have to share.

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